MULTIBAND IMAGING PHOTOMETER FOR SIRTF
Pocket Guide

Basic MIPS Capabilities:

Imaging photometry at 24, 70, and 160 μm and low resolution (R = 15 – 25) spectroscopy between 55 and 96 μm. A fine pixel scale option at 70 μm (no change required for the other two bands), combined with precise subpixel sampling dither patterns, allow data processing to achieve "super resolution" imaging. A cryogenic scan mirror mechanism provides freeze frame scan mapping, efficient dithering, and other instrument capabilities.

MIPS Instantaneous Fields of View:

24 μm	5.2x5.2 arcminutes
70 μm	5.3x5.3 or 2.6x2.6 arcminutes
160 μm	0.5x5.3 arcminutes (effective)
SED Slit	3.8x0.32 arcminutes

Basic Sensitivities (low background):

5 sigma in 500 seconds on source

24 μm	185 μJy
70 μm	1410/3000 μJy (Default/Fine scale)
SED	11 mJy @ 55 μm, 14 mJy @ 95 μm
160 μm	10 mJy*; 3400 μJy**
	*160 μm is model dependent confusion limited.
	**no confusion.

The MIPS Astronomical Observation Templates:

Photometry & Super Resolution
- Telescope staring mode imaging photometry

Scan Mapping
- Freeze frame mapping in all three bands with constant telescope slewing

Spectral Energy Distribution (SED)
- Low resolution (R = 15 – 25) spectroscopy over 55 to 96 μm (half power response points)

Total Power Mode
- Zero level brightness of very extended emission

The MIPS Detector Arrays:

24 μm	Si:As (IBC)
	128x128 pixels; 2.45"
	4.7 μm bandwidth
70 μm	Ge:Ga
	32x32 pixels; 4.9" or 9.9"
	19 μm bandwidth
	SED R = 15 - 25
160 μm	Stressed Ge:Ga
	2x20 pixels; 15.8"
	35 μm bandwidth

Saturation Limits:

Point source in 1 second (Jy); Extended source in 10 seconds (MJy/ster)

Band	Point Source	Extended
24 μm	6.4	500
70 μm (default)	8	70
70 μm (fine)	41	360
SED @ 55,70,95μm	24,64,220	430@60 μm
160 μm	17	33

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